



Performance... Economy... Collins **SSB**

The steady move to single sideband operation is definite, and naturally leading the trend is Collins, the sideband pioneer.

Collins forward-thinking design work has produced the top-performing team on the air. In the advantages of SSB—greater talk power, less distortion and decreased bandwidth—the KWS-1/75A-4 combination

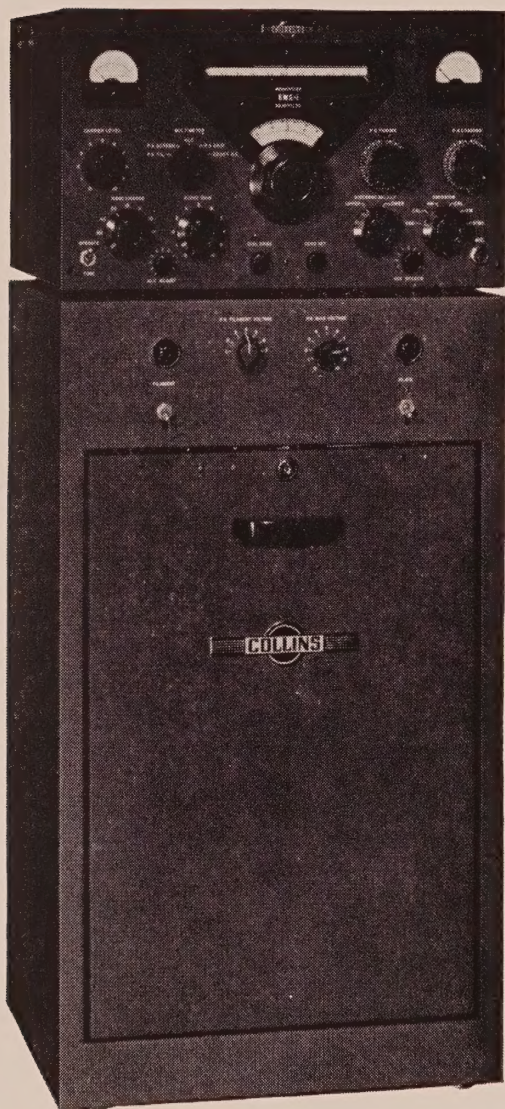
is unmatched in performance.

Considering this performance, you can operate Collins for *less than anything else you can buy or build!* Actual cost-per-day figures—the difference between purchase price and trade-in value—prove this. Taking advantage of a convenient time payment plan, you can have Collins in your shack now. Ask your distributor for the figures.



KWS-1 Transmitter

most versatile kilowatt
ever produced



Unprecedented compactness is achieved without undue crowding. Exciter and RF power amplifier are in a single receiver-size housing which can be placed on the operating desk or mounted on top of the power supply cabinet. Proved circuit applications and components—extremely accurate 70E VFO, Pi-L output network and Collins Mechanical Filter—give you unmatched performance, accuracy and stability in SSB, AM and CW operation.

KWS-1 SPECIFICATIONS

POWER AMPLIFIER INPUT—1 kw peak envelope power SSB, 1 kw CW operation. Equivalent to 1 kw on AM when using narrow bandwidth receiver.

R-F OUTPUT IMPEDANCE—52 ohms.

MAXIMUM PERMISSIBLE STANDING WAVE RATIO—2.5 to 1.

FREQUENCY RANGE—80, 40, 20, 15, 11, 10 meters.

EMISSION—SSB, AM carrier plus one sideband, CW.

FREQUENCY CONTROL—70E-23 Master Oscillator.

HARMONIC AND SPURIOUS RADIATION—(Other than 3rd order distortion products.) Intra-channel radiation is at least 50 db down. All spurious radiation at least 40 db down at output of exciter. Second harmonic at least 40 db down; all other harmonics at least 60 db down.

DISTORTION—SSB, 3rd order products approximately 35 db down at 1 kw PEP.

FREQUENCY STABILITY—Warmup: After 15 minutes warmup, within 300 cps of starting frequency. Dial Accuracy: 350 cps after calibration.

AUDIO CHARACTERISTICS—Response: ± 3 db, 200 to 3,000 cps. Noise and hum: 40 db or more below reference output level. Input: .01 volts for rated power output.

MICROPHONE INPUT—Will match high impedance dynamic or crystal.

PHONE PATCH IMPEDANCE—600 ohms, unbalanced to ground.

CIRCUIT PROTECTION—Overload relay and fuses.

WEIGHT—210 pounds.

SIZE—40½" high, 17¼" wide, 15½" deep.

RACK MOUNTING—Angle brackets kits available for RF Unit and power supply.

TUNING CONTROLS—Bandswitching, frequency selector, PA tuning, PA loading.

OTHER CONTROLS—Filament power, plate power, filament adjust, PA bias voltage, tune-operate, multimeter switch, VOX speaker gain, VOX speech gain, band change, audio gain, sideband select, emission selector, dial lock, zero set, ALC adjust.

ACCESSORIES REQUIRED—High impedance microphone, telegraph key, 52 ohm antenna.

POWER SOURCE—230 v, 3 wire, 50/60 cycle, single phase, grounded neutral; or 115 v, 2 wire, 50/60 cycle, single phase. 1500 W 1 kw input CW.

Net price, complete with tubes—\$2,095.00

75A-4 Receiver

applies time-proven features
to SSB techniques



Designed for best SSB reception without sacrificing top efficiency in other modes, the 75A-4 has the top features proved in earlier models—excellent image rejection through double conversion, precise dial calibration and high stability of Collins VFO and crystal-controlled first injection oscillator, and the ideal selectivity of Collins Mechanical Filter in the IF strip.

75A-4 SPECIFICATIONS

FREQUENCY RANGE—160, 80, 40, 20, 15, 11, 10 meters

SIZE—10½" high, 17¼" wide, 15½" deep.

WEIGHT—35 pounds.

RACK MOUNTING—Angle mounting kit available.

NUMBER OF TUBES—22, including rectifiers.

SENSITIVITY—1.0 microvolt for 6 db signal-to-noise ratio with 3 kc bandwidth.

AVC CHARACTERISTICS—Audio rise less than 3 db for inputs of 5 to 200,000 uv.

AVC TIME CONSTANTS—Rise Time—.01 second. Release Time—.1 second (fast), 1 second (slow).

IMAGE AND IF REJECTION—Image ratio at center of each band 50 db or better. IF rejection at center of each band 70 db or better.

AUDIO CHARACTERISTICS—Output—.75 watts with a 3.0 uv signal, 30% modulated. Output impedance—500 ohms, 4 ohms. Response of audio circuits—± 3 db 100 cps to 5,000 cps. Distortion—less than 10%.

MUTING—Provisions for muting the Receiver during key-down operation are provided. A muting voltage of +20 volts must be supplied by transmitter.

FREQUENCY STABILITY (at 14 mc)—Temperature—Less than 1200 cycles drift from 0 to ±60°C. Warmup drift—Less than 300 cycles after 15

minute operation. Line voltage coefficient—Less than 100 cycles for ±10% change. Dial Accuracy—350 cycles after calibration.

Net price, complete with gear Reduction Tuning Knob, 3.1 kc Mechanical Filter, tubes and instruction book—\$645.00



MECHANICAL FILTERS

Collins F455J-Series Mechanical Filters are available as accessories for the 75A-4 Receiver. The F455J-05 Filter, bandwidth of 500 cycles, is recommended for CW reception; the F455J-15 (1.5 kc) for RTTY; the F455J-60 (6.0 kc) for AM where interference is not a problem; and the F455J-21 (2.1 kc) and F455J-31 (3.1 kc) for AM and SSB. The F455J-31 is supplied as standard equipment in the Receiver.

Net price, F455J-05—\$50.00

Net price, F455J-15, J-21, J-31, J-60—\$45.00

GEAR REDUCTION TUNING KNOB

Provides new ease and accuracy in tuning SSB signals. Operating on a 4 to 1 ratio, it eliminates Dial Drag and has no detectable backlash. Simple installation on KWS-1 and all 75A models.

Net price—\$15.00



SC-101 Station Control

provides smooth coordination
of complete SSB station

ELMAR ELECTRONICS

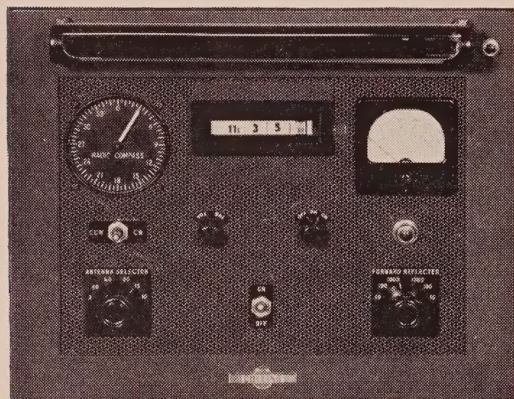
OAKLAND 7, CALIFORNIA

Hlgate 4-7011 140 - 11th St.

(Formerly Electric Supply Co.)

W6TT

W6 DUB



SPEAKER/CONTROL

The 312A-1 Speaker/Control Unit includes loudspeaker and has space for the extra control functions necessary in a complete installation. Unit is furnished with removable perforated steel front panel insert with no cutouts; operator can remove panel and install any control functions such as beam direction indicators, clocks, switches, etc. A 10" speaker is submounted behind the front panel and a lumiline lamp above. Rear of the unit is open and across the bottom is a terminal strip.

Net price—\$39.50

SPEAKER

The 270G-3 cabinet and 10" PM speaker assembly is attractively finished to match the 75A-4 Receiver.

Net price—\$22.00

The SC-101 provides the necessary equipment to connect the Transmitter and Receiver, beam direction indicator, beam control, phone patch circuit, standing wave ratio meter and remote selection of any one of six antennas.

The System is composed of three units:

312A-2 SPEAKER/CONTROL UNIT

This desk-top unit includes a 10" speaker, beam direction indicator, SWR meter, 24-hour numeral clock, lumiline operating lamp, phone patch unit, auxiliary power supply for control circuits, and terminal boards for interconnecting all units. A synchro control unit for tower mounting is also supplied, as is a directional coupler for use with the SWR unit.

68Y-1 ANTENNA SELECTOR

Mounted on wall near desk, the 68Y includes the antenna transfer relay, two coax relays for antenna selection, mounting bracket for directional coupler and necessary interconnecting coax cables.

534A-1 WIRING DUCT & HARNESS

This metal duct mounts along back of desk or table and houses all interconnecting cables. Along the top of the duct are ac utility outlets. Also included is a cable harness with wires necessary to connect the Transmitter, Receiver and extra control functions.

Net price—\$695.00

Collins

CREATIVE LEADER IN COMMUNICATION

